

NATIONAL COMPETENCY STANDARDS FOR WOODEN FURNITURE MAKER (CERTIFICATE 2&3)

TVET QUALITY COUNCIL BHUTAN QUALIFICATIONS AND PROFESSIONALS CERTIFICATION AUTHORITY THIMPHU, BHUTAN: DEC 2023

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FOREWORD

The TVET Quality Council, BQPCA is pleased to present the National Competency Standards (NCS) for **WOODEN FURNITURE MAKER,** BQF Certificate 2 and 3, which is developed in consultation with the field experts and trainers. The main objective of developing National Competency Standards is to set up a well-defined nationally recognized TVET Qualifications that will help in setting a benchmark for the TVET Qualifications in our country aligned to the international best practices.

The standards are developed to ensure that the TVET trainees possess the desired Skills, Knowledge and Attitude required by the industries. In order to ensure the relevancy of the competencies, the standards are developed in close consultation and partnership with industry experts and trainers from training institutes.

A training system based on National Competency Standards shall ensure that the training is relevant to the needs of the labour market. As a result, future TVET trainees will be better skilled to meet the needs and expectations of industries and employers. Such a positive impact on the employability of TVET graduates will enhance the reputation of the TVET system and make it attractive to the youths. While acknowledging the existing level of cooperation and collaboration, the Council earnestly requests employers and training providers to extend the fullest support and cooperation in development and implementation of the National Competency Standards. The ultimate objective is to build a competent and productive national workforce that will contribute to the socio-economic development of our country.

We gratefully acknowledge the valuable contributions made by experts from industries and trainers during the consultation and validation processes of the NCS development. We further look forward to improved industry engagement and active participation of trainers in the development of a quality-assured demand driven TVET system.

Director BQPCA

ACKNOWLEDGEMENT

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PACKAGING OF QUALIFICATIONS





Unit Title		Element of Competence	
1.	Make Tables and Chairs	1.1 Prepare for Making Tables and Chairs1.2 Make Joints and Assemble the Parts1.3 Carry out Finishing Works	
2.	Make Bed, Sofa Frames and Chodrom	2.1 Make Bed2.2 Make Sofa Frames2.3 Make Chodrom	
3.	Make Storage Cabinet	3.1 Prepare for Making Cabinet3.2 Make Shutters, Joints and Assemble the Parts	
4.	Make Traditional Furniture	4.1 Prepare for Making Traditional Furniture4.2 Make Joints and Assemble the Parts	
5.	Make Choesham	5.1 Prepare for Making Choesham 5.2 Make Joints and Assemble the Parts	

UNIT TITLE	Make Tables and Chairs		
DESCRIPTOR	This unit covers the competencies required to make tables and chairs as per the job requirement following standard procedure		
CODE	7115-U1-L2		
Credit	12		
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA		
1. Prepare for Making Tables and Chairs	 1.1 Select and use required <i>Personal</i> <i>Protective Equipment</i> as per the job requirement 1.2 Interpret drawings and detail plans as per the job requirement 1.3 Perfom sizing of <i>materials</i> as per the drawings and specifications 1.4 Carry out planing and thicknessing of work pieces to the required size following standard procedures 		
2. Make Joints and Assemble the Parts	2.1 Make joints as per the job requirement following standard procedures2.2 Assemble the parts following standard procedures		

	 2.3 Use <i>hand tools and power tools</i> as per the job requirements following standard procedures 2.4 Operate <i>wood working machines</i> as per the job requirement following standard procedures
3. Carry out Finishing Works	 3.1 Apply putty/wood filler as per the job requirement following standard procedures 3.2 Carry out sanding works as per the standard procedures 3.3 Carry out polishing as per the standard procedures 3.4 Perfom quality control of the furniture following standard procedures 3.5 Perform packaging of the finished products for delivery following standard procedures

RANGE STATEMENT

Personal Protective Equipment (PPE) may include but not limited to:

- Helmet •
- Mask •
- Safety Shoes •
- Apron

- Goggles •
- Gloves •
- Ear Muff

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Materials may include but not limited to:

 Timbers Glue Polishing Items Dowels Epoxy 	 Boards Nails & Screws Sand Papers Hardware Fittings Melamine 	
Hand Tools and Power tools may inc	lude but not limited:	
 Planer Machine Chisel Drill Knife 	JigsawCircular SawRouter	
Wood Working Machine may include	but not limited:	
 Thickneser Panel saw CNC Machine Auto Drilling Machine 	 Surface Planer Band Saw Beam Saw Edge Banding Machine 	
Critical Aspects		
 Following of Occupational and Health and safety at all times Make tables and chairs as per the drawings and designs following 		

 Make tables and chairs as per the drawings and designs following standard procedures

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS	
 Ethics and Integrity OHS Regulation Basic First Aid Seasoning of Timbers Types of Joints Timber species Measurement Tolerance Forestry Rules and Regulations 	 Team Work Communication Problem Solving Interpersonal Relationship Creativity Time Management 	

- Economic use of Materials
- Costing and estimation
- Types of adhesive
- Types of abrasives
- Technical Drawings
- Polishing types
- Types and functions of machines
- Work station
- House Keeping
- Furniture Ergonomics

UNIT TITLE	Make Bed, Chodrom and Sofa Frames		
DESCRIPTOR	This unit covers the competencies required to make Beds, Chodrom and Sofa frames as per the drawings and designs following standard procedures		
CODE	7115-U2-L2		
Credit	10		
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA		
1. Make Bed			

	1.8 Perform <i>finishing work</i> as per the job requirements1.9 Perform packaging of the finished products for delivery following standard procedures
2. Make Chodrom	 2.1 Read and interpret drawings and designs as per the job requirement 2.2 Perfom sizing of materials as per the drawings and specifications 2.3 Perfom planing and thicknessing of work pieces as per the job requirement following standard procedures 2.4 Perform molding of work pieces as per the drawing 2.5 Make joints as per the job requirement following standard procedures 2.6 Assemble the work pieces as per the job requirement following standard procedures 2.7 Carry out finishing works as per the standard procedures 2.8 Perform packaging of the finished products for delivery following standard procedures
3. Make Sofa Frames	3.1 Read and interpret drawings and designs as per the job requirement

:	 3.2 Perfom sizing of materials as per the drawings and specifications 3.3 Perfom planing and thicknessing of work pieces as per the job 3.4 Make joints as per the job requirement following standard procedures
	following standard procedures3.5 Assemble the work pieces as per the job requirement following standard procedures3.6 Perform finishing works following standard procedures3.7 Perform packaging of the finished products
	for delivery following standard procedures

RANGE STATEMENT			
Personal Protective Equipment (PPE) may include but not limited to:			
 Helmet Mask Safety Shoes Apron 	GogglesGlovesEar Muff		
Joints may include but not limited to:			
 Mortise and tennon joint Half Lap Joint Other Wood Joints Dowel Joint T-joint 			
Work Pieces may include but not limited to:			

•	Frames	•	Brace
•	Support	•	Bed Top
•	Bed Slats		

Finishing work may include but not limited to:

•	Polishing	•	Sanding
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Critical Aspects

- Demonstrate compliance with safety regulations applicable to work operations at all times
- Make bed, Chodrom and sofa frame to required strength as per the drawings and design following standard procedures

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
 Ethics and Integrity OHS Regulation Basic First Aid Seasoning of Timbers Types of Joints Timber species Measurement Tolerance Forestry Rules and Regulations Economic use of Materials Costing and Estimation Types of adhesive Types of abrasives Technical Drawings Polishing types Types and functions of machines House Keeping Furniture Ergonomics 	 Team Work Communication Problem Solving Interpersonal Relationship Creativity Time Management

UNIT TITLE	Make Storage Cabinet	
DESCRIPTOR	This unit covers the competencies required to make cupboard, show case, book shelf, TV cabinet, file rack, kitchen cabinet, shoe rack, counter table, drawer and other furniture related to cabinets as per the drawings and design following standard procedures	
CODE	7115-U3-L2	
CREDIT	10	
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA	
1. Prepare for Making Cabinet	 1.1 Select and use required <i>Personal</i> <i>Protective Equipment</i> as per the job requirement 1.2 Interpret drawings and designs as per the Job requirement 1.3 Perfom sizing of <i>materials</i> as per the drawings and specifications 1.4 Perform planing and thicknessing of work pieces to the required size following standard procedures 	

2. Make Shutters, Joints, and assemble the Parts	 2.1 Make <i>joints</i> as per the job requirement following standard procedures 2.2 Make shutters and drawer as per the drawings and design following standard procedure 2.3 Assemble the work pieces as per the job requirement following standard procedures 2.4 Fix the <i>hardware fittings</i> as per the job requirement 2.5 Carry out <i>finishing works</i> as per the
	2.4 Fix the <i>hardware fittings</i> as per the job requirement
	2.5 Carry out <i>finishing works</i> as per the standard procedures2.6 Perform packaging of finished products following standard procedures

RANGE STATEMENT		
Personal Protective Equipment (PPE) may include but not limited to:		
 Helmet Mask Safety Shoes Apron Materials may include but not limited to	 Goggles Gloves Ear Muff 	
 Timbers Board Glue Hardware fittings 	GlassWire MeshNails and Screws	

Joints may include but not limited to:		
Dowel JointT-joint	Tennon and mortise jointLap Joint	
Hardware fittings may include but not I	imited to:	
 Hinges Latches Tower bolt Lock Handle Minifix Allen Bolt and Thread Barrel 	 Magnetic Catcher Shelve Pins Drawer Slide Sliding Channels/Roller Wooden Dowel Buffer Anchor Bolt 	
Finishing works may include but not lin	nited to:	
Sanding and applying wood fillersWood Staining	Polishing	
Critical Aspects		
 Demonstrate compliance with safety regulations applicable to work operations at all times Make storage cabinet as per the drawings and designs following standard procedures 		

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
 Ethics and Integrity Basic First Aid OHS regulation Types of joints Estimation and Costing Economic use of materials Seasoning of timbers Types of wood polish 	 Team Work Communication Problem Solving Interpersonal Relationship Creativity Time Management

Wood speciesTypes of storage cabinets

UNIT TITLE	Make Traditional Furniture
DESCRIPTOR	This unit covers the competencies required to make simple traditional items as per the drawings and designs following standard procedures
CODE	7115-U4-L2
CREDIT	11
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Prepare for Making Traditional Furniture	 1.1 Select and use required <i>Personal Protective Equipment</i> as per the job requirement 1.2 Interpret drawings and designs as per the Job requirement 1.3 Perfom sizing of materials as per the drawings and specifications 1.4 Carry out planing and thicknessing of work pieces to the required size following standard procedures
2. Make Joints and Assemble the Parts	 2.1 Make <i>joints</i> as per the job requirement following standard procedures 2.2 Make work pieces as per the drawings and design following standard procedure 2.3 Assemble the work pieces to form <i>traditional furniture</i> as per the job requirement following standard procedures

2.4 Fix the hardware fittings as per the job
requirement following standard procedures
2.1 Perform <i>finishing works</i> as per the standard
procedures
2.2 Perform packing of the finished products
following standard procedures

RANGE STATEMENT		
Personal Protective Equipment may include but not limited to:		
GogglesHand Gloves	Safety Shoes	
Materials may include but not limited to:		
TimbersGlassBoard	GlueNails and Screws	
Joints may include but not limited to:		
Dowel JointLap Joint	Tennon and Mortise Joint	
Traditional furniture may include but not limited to:		
ZhugthriTshog-zhong	TorthriPodium/Lectern	
Hardware fittings may include but not limited to:		
MS AngleCastor Wheel	Shelf PinButt Hinges	

Finishing work may include but not limited to		
PolishingSanding	Painting	
Critical Aspects		
 Demonstrate compliance with safety regulations applicable to work operations at all times Make traditional furniture as per the drawings and design following standard procedures 		

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
 Ethics and Integrity Basic First Aid OHS regulation Types of joints Estimation and costing Economic use of materials Seasoning of timbers Types of wood polish Wood species Wood defects Types of traditional furniture Economic use of Materials Costing and estimation Types of adhesive Types of abrasives Technical Drawings Polishing types Types and functions of machines House Keeping Furniture Ergonomics 	 Team Work Communication Problem Solving Interpersonal Relationship Creativity Time Management

UNIT TITLE	Make Choesham		
DESCRIPTOR	This unit covers the competencies required to make Choesham of all types as per the drawings and designs following standard procedures		
CODE	7115-U5-L3		
CREDIT	15		
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA		
1. Prepare for Making Choesham	 1.1 Select and use required <i>Personal</i> <i>Protective Equipment</i> as per the job requirement 1.2 Interpret drawings and designs as per the Job requirement 1.3 Perfom sizing of <i>materials</i> as per the drawings and specifications 1.4 Carry out planing and thicknessing of work pieces to the required size following standard procedures 		
2. Make Joints and Assemble the Parts	 2.1 Make <i>joints</i> as per the job requirement following standard procedures 2.2 Make <i>work pieces</i> as per the drawings and design following standard procedure 2.3 Assemble the work pieces as per the job requirement following standard procedures 		

2.4 Fix the hardware fittings as per the job	
requirement following standard procedures	
2.5 Carry out <i>finishing works</i> as per the	
standard procedures	
2.6 Perform packing of the finished products	
following standard procedures	

RANGE STATEMENT				
Personal Protective Equipment may include but not limited:				
GlovesGogglesEar Muff	Safety ShoesMask			
Materials may include but not limited to:				
TimbersGlassBoard	GlueNails and Screw			
Joints may include but not limited to:				
Dowel JointLap Joint	Tennon and Mortise JointMitre Joints			
Work pieces may include but not limited to:				
 Gu-cha/Rig-Nga Go-Zingkha Kachung Baagam 	DungPemChoetse			
Hardware fittings may include but not limited to:				

 Hinges Latches Tower bolt Lock 	HandleMagnetCorner pins		
Finishing work may include but not limited to:			
Polishing	Sanding		
Critical Aspects			
 Demonstrate compliance with safety regulations applicable to work operations at all times Make choesham as per the drawings and design following standard procedures 			

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
 Ethics and Integrity Basic First Aid OHS regulation Types of joints Estimation and costing Economic use of materials Seasoning of timbers Types of wood polish Wood species Types of choesham Traditional cornices Types of adhesive Types of abrasives Technical Drawings Polishing types Types and functions of machines House Keeping 	 Team Work Communication Problem Solving Interpersonal Relationship Creativity Time Management

ANNEXURE

1.1. National Competency Standards (NCS)

The National Competency Standards specify the skill, knowledge and attitudes applied to a particular occupation. Standards also specify the standards or criteria of performance of a competent worker and the various contexts in which work may take place. Standards provide explicit advice to assessors regarding the skill and knowledge to be demonstrated by candidates seeking formal recognition either following training or through work experience.

1.2. Purpose of National Competency Standards

National Competency Standards serve a number of purposes including:

- Providing advice to curriculum developers about the competencies to be included in the curriculum.
- Providing specifications to assessment resource developers about the competencies within an occupation to be demonstrated by candidates.
- Providing advice to industry/employers about job functions, which in turn can be used for the development of job descriptions, performance appraisal systems and work flow analysis.

1.3. Bhutan Qualifications Framework (BQF)

Bhutan Qualifications Framework is an integrated national framework that outlines all types of qualification in Bhutan. As an established and nationally accepted instrument, the BQF has been benchmarked against international practices in terms of standards. The BQF aims to recognize all forms of learning systems, including formal, non-formal, and informal learning. It acknowledges technological advancements and recognizes contemporary modes of delivery. It covers a broad range of education systems including the TVET education.





* RPL = Recognition of Prior Learning

1.5 TVET Qualifications Levels

TVET Qualifications has six levels as per the BQF. The six levels are:

Applied Degree: Level 6 Advanced Diploma: Level 5 Diploma: Level 4 Certificate 3 Certificate 2 Certificate 1

1.6. Level Descriptors

The TVET Qualification levels are set based on the level descriptors, as defined in the BQF. The detail of the qualification level descriptor is as follow:

Certificate 1

Skills	Knowledge:	Application
 Applying operational literacy, numeracy skills required to carry out simple tasks Applying simple solutions to solve simple and straightforward everyday issues Communicating using everyday expressions and simple phrases 	 Foundationa, every day and general: Basic operational knowledge and skill Utilization of basic available information Known solutions to familiar problems Little generation of new ideas 	 Highly structured tasks with close support and supervision Minimal discretion and judgement Readiness to work together and share knowledge with others

Certificate level 2

Skills	Knowledge	Application
 Applying standard processes relevant to carry out known tasks Applying a set of known solutions to solve simple and straightforward issues Using simple and direct exchange of 	 Basic, factual and conceptual Some relevant theoretical knowledge Interpretation of available information Discretion and judgments 	 Structured and stable tasks General support and supervision that require some discretion and judgement

information on familiar and routine matters	 A range of known responses to familiar problems 	 Collaborati on with others to achieve goals
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Certificate 3

Skills	Knowledge:	Application:
 Applying a range of standard processes to known but varied tasks Selecting and applying a range of solutions to familiar and unfamiliar problems 	 Theoretical with some technical and operational processes: A broad knowledge base which incorporates some theoretical concepts Analytical interpretation of information Informed judgment A range of sometimes innovative responses to concrete but often unfamiliar problems 	 Stable tasks with some aspects of change General guidance and supervision that require discretion and judgement Adapting to own behaviours to work with others

Diploma		
Skills:	Knowledge	Application
 Selecting and applying a range of standard processes relevant to varied and sometimes unpredictable tasks Selecting and applying a range of solutions involving formulation of solutions to resolve complex issues Demonstrating a high level of proficiency in English and Dzongkha 	 Broad theoretical, technical and operational Specialist knowledge with depth in more than one area Analysis reformatting and evaluation of a wide range of information Formulation of appropriate responses to resolve both concrete and abstract problems 	 Stable tasks with predictable changes Broad guidance with some selfdirection that require sound judgement Taking some responsibilit y for planning and coordinatio n with others

1.6 CODING USED FOR NATIONAL COMPETENCY STANDARDS

The coding and classification system developed in Bhutan is logical, easy to use, and also aligned with international best practices. The Bhutanese coding and classification system is based on the International Standard Classification of Occupations, 2008 (ISCO-08) developed by the International Labour Organisation (ILO). The coding of the National competency standards forms the basis of the identification code for the Vocational Education and Training Management Information System (VET – MIS) both in terms of economic sector identification and that of the individual standard.

1.7. Coding the individual national competency standards

Coding the individual skills standard has a multiple purpose:

- to identify the level,
- to identify to which module the standard belongs,
- to identify in which order the standard is clustered within that module.

A job can include a number of competencies described in the national competency standards.

However, in

order to follow a logical order, only national competency standards related to each other and following a logical sequence in terms of training delivery, from the simple to the complex, are clustered into a module. Some standards are so complex that they need to stand alone.

Implementation and operational procedures for National Competency Standards (NCS).

